

8.1.1.d Del Mar Mesa (H Series, H 1-15)

Site Description and Existing Conditions

Del Mar Mesa (H Series, H 1-15) is a 420-acre open space preserve made up of acquisition and mitigation lands owned by the City of San Diego, County of San Diego, California Department of Fish and Game and U.S. Fish and Wildlife Service. It is located south of SR 56, east of the developments of The Preserve, Duck Pond Ranch and Bougainvillea, and north of Los Penasquitos Canyon in the Del Mar Mesa Community Planning Area. This site is within the MHPA and is zoned Open Space. Surrounding land uses include open space, residential, and transportation.

Three hundred forty-four vernal pools (22,263 m² [2.23 ha] basin area [5.50 acres]), including natural vernal pools, road ruts and created basins, were mapped at Del Mar Mesa. The vernal pools are underlain by Redding gravelly loam and upland vegetation is characterized by late successional stage chamise chaparral. Robust populations of *E. aristulatum*, *P. abramsii* and *B. sandiegonensis* were recorded on Del Mar Mesa in 2003.

Prior to preservation, some areas were impacted by off-road vehicles. The site is currently utilized for passive recreation, and official trails will be installed to limit impacts to natural resources. Preserve management will follow the *Carmel Mountain and Del Mar Mesa Resource Management Plan* (RECON, 2005).

The site was identified as necessary to stabilize populations of *E. aristulatum*, *P. abramsii* and *B. sandiegonensis* by the adopted *Recovery Plan for Vernal Pools of Southern California* (USFWS, 1998).

Threats

Development

Two un-conserved, privately-owned parcels with limited development potential remain on Del Mar Mesa; development is currently being proposed on one parcel.

Invasive Species

Vegetation species at Del Mar Mesa are primarily native; however, some non-native grasses and *Erodium* spp. occur.

Trespass

The public is allowed limited, non-motorized access to Del Mar Mesa. Trespass by off-road vehicles may occur in rare instances. Gates have been installed across major routes accessible by vehicles, and fencing was required for many of the mitigation sites.

Fire

Del Mar Mesa is part of several large, inter-connected open space areas where fire is an important part in the natural ecologic regime. At other vernal pool sites in San Diego, comparisons of pre- and post-fire surveys do not support the assumption of long-term damage to sensitive species or their physical habitat. Therefore, fire does not appear to threaten species presence or abundance at vernal pool ecosystems.

Fire Suppression

During an emergency, this site may be utilized for fire suppression activities. A fire management plan has been prepared for this site, and is included in the *Carmel Mountain and Del Mar Mesa Resource Management Plan* (RECON, 2005). Section 10, entitled Fire Management, includes information on fire history and the ecological role of fire, objectives, fire management units, as well as requirements for reporting, extinguishing and reviewing fires that occur on Del Mar Mesa.

Current Management Activities

Several parcels have been purchased as mitigation for off-site development impacts, including:

- 1) City of San Diego Metropolitan Waste Water Division
APN 306-050-2100 306-050-0700
- 2) Lands previously managed by The Environmental Trust, mitigation for the Laguna Nigel and La Jolla Crossroads (LDR 99-0647) projects
APN 306-050-2900
- 3) Mira Mesa MarketCenter (LDR 96-7371, USFWS BO 1-6-98-F-23)
(dedicated to the City of San Diego)
APN 309-010-0200
- 4) City of San Diego Environmental Services Department
APN 306-050-1100
- 5) California Department of Transportation, mitigation for I-15 and extension of SR-52, including 40 created vernal pools (dedicated to the California Department of Fish and Game)
APN 309-010-0400 309-010-0700 309-010-0800
309-010-0900 309-010-1000 309-010-2200
309-010-2300 309-010-2500 309-010-2700
309-010-2900 309-010-3000 309-010-3100
309-010-3200 309-010-3300 309-010-3400
309-010-3500

The City of San Diego MSCP Subarea Plan states, “If possible, the Del Mar Mesa area should be managed as a single unit rather than split into separate entities according to ownership (County, various City departments, easements).” Therefore, all maintenance and management activities (excluding project-specific mitigation requirements) will be conducted in accordance with the *Carmel Mountain and Del Mar Mesa Resource Management Plan* (RECON, 2005), which creates a complete action plan for the area. Activities will include:

- 1) Maintenance of existing SDGE easements along roads containing road ruts;
- 2) Installation and regular maintenance of trails, trash bins and other facilities in a manner to limit public interaction with and impact to sensitive resources;
- 3) Control of exotic species through monitoring and prompt removal;
- 4) Public and volunteer awareness efforts including interpretive signage and programs and resource protection outreach;
- 5) Removal of transient encampments through cooperation with the appropriate law enforcement agencies

- 6) Minimization of edge effects through lighting restrictions, fencing/barriers, trash removal, removal of problem species and public awareness.

The Resource Management Plan also contains recommendations for restoration of vernal pools and upland habitats.

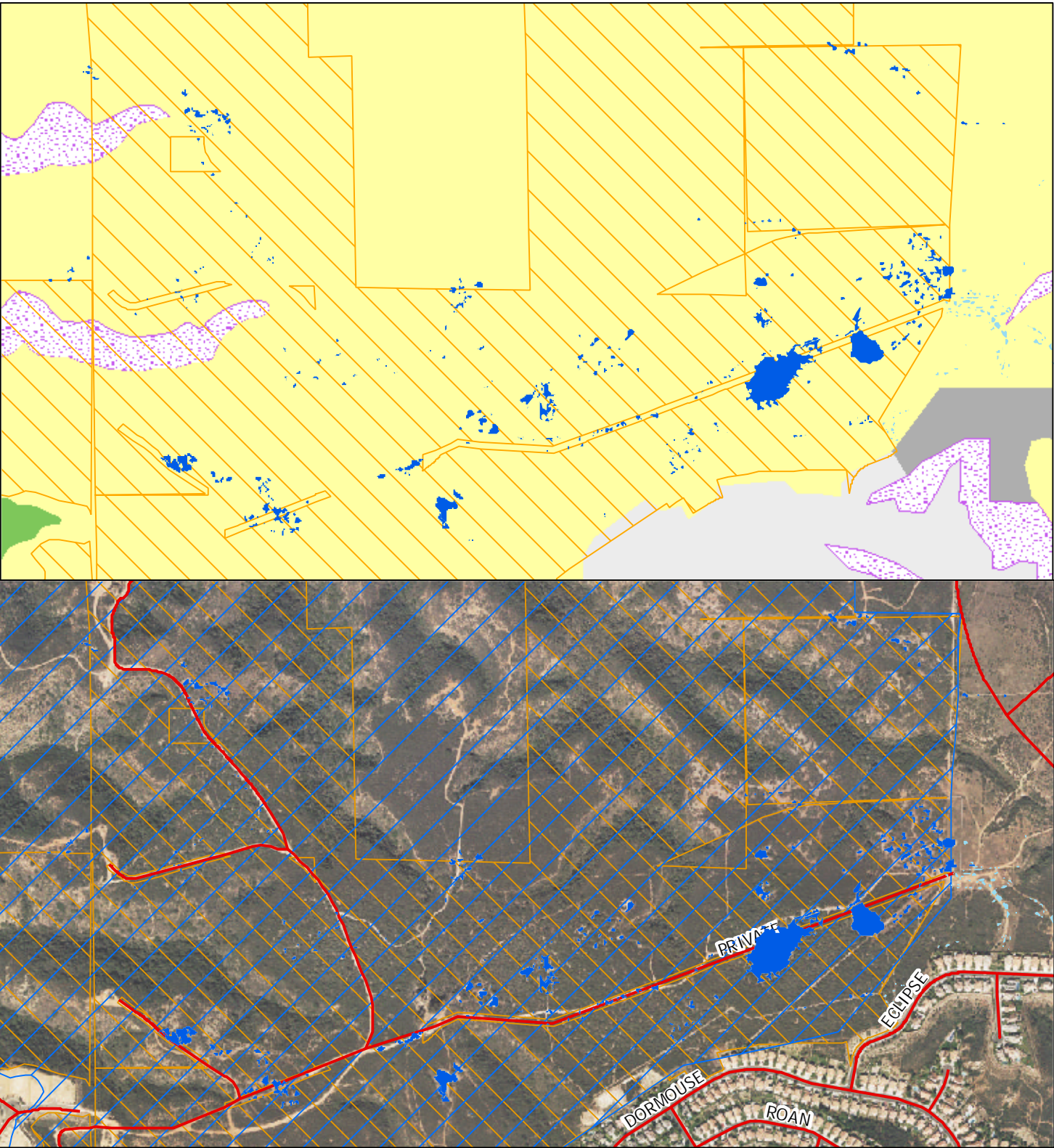
Management Recommendations

Seek funding for the implementation of the *Carmel Mountain and Del Mar Mesa Resource Management Plan* (RECON, 2005), including recommended vernal pool restoration projects.

Remove rebar, stakes and “chicken wire” fencing around vernal pools, which were installed in historic studies and were abandoned at the end of the survey. The metal has rusted and may be affecting the pH and soil composition in vernal pools.

Provide follow-up studies on the restored vernal pools on Del Mar Mesa (see Black and Zedler 1998).

Figure 4



Del Mar Mesa (H Series, H 1-15)



0.1 Miles
0.25 Kilometers

- Roads
- MHPA
- Conserved Lands
- Vernal Pools at Site
- Adjacent Vernal Pools
- Coastal Sage Scrub
- Chaparral
- Grassland
- Disturbed Land
- Urban/Developed

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

Required Management Activities

The management requirements discussed in this section are permit conditions associated with City of San Diego approval of the Shaw Texas project (PTS 2873). Specific details are available in the *Vernal Pool Management Plan Shaw-Lorenz Project* (see Appendix B of the *Biological Resources Assessment of the Approximately 278-acre Shaw-Lorenz Site* [Natural Resource Consultants, 2004]). The costs associated with these required management activities are the responsibility of the developer (Pardee Construction Company) and subsequently the Home Owners Association.

- Invasions of non-native species into the conserved areas will be removed utilizing non-mechanized means. Herbicide use is not permitted within the conservation areas.
- Signage, barriers and fencing sufficient to protect the vernal pools will be installed and maintained.
- Lighting will not be installed within conserved areas and, in adjacent lots, will be shielded to direct spillage away from vernal pool areas.
- Grading, development and landscape irrigation will be completed in a manner to avoid unnatural drainage to vernal pools during and after construction.
- A public information brochure will be provided to buyers with specific information on vernal pools, the lots containing these features within the development, and appropriate uses of adjacent lands (i.e. non-invasive landscaping, minimizing irrigation run-off, etc.)
- Trails to be developed with this project have been sited and fenced, where necessary, to avoid user impacts to vernal pools.
- Trash removal will occur at regular intervals or as necessary.

In addition to the project conditions listed above, and included in the *Vernal Pool Management Plan Shaw-Lorenz Project* (Natural Resource Consultants, 2004), U.S. Fish and Wildlife Service required the following mitigation and management activities through Biological Opinion 1-6-06-F-4005.4 in order to “avoid, minimize and compensate for direct and indirect impacts” to fairy shrimp habitat.

- Preservation of all on-site vernal pools and some additional depressional features supporting *B. sandiegonensis*
- Enhancement of vernal pool habitat in Lot WW and preservation of Lot 128 to minimize edge effects
- \$100,000 for vernal pool restoration on-site or in other appropriate locations within the MHPA
- \$20,000 annually from the HOA for maintenance and management of the on-site vernal pool preserve

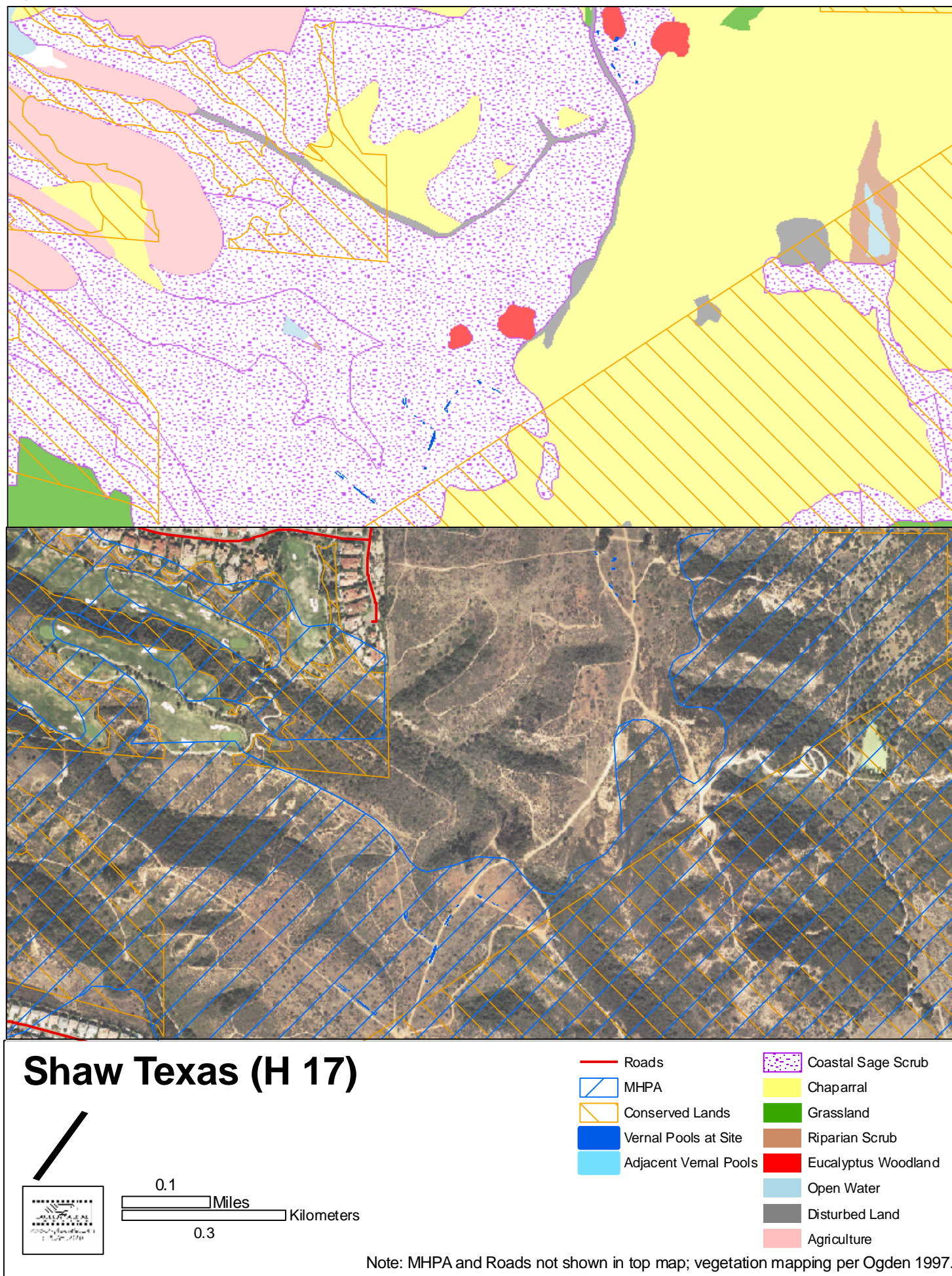
Management Recommendations

The Land Manager should encourage research studies, including projects to assess the impact of edge effects and isolation on vernal pool habitats and their associated species.

Given the proximity to residential neighborhoods, it is recommended that educational programs be provided through local schools, Home-Owner’s Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including

vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate a sense of ownership of local open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 5



8.1.1.f H 33

Site Description and Existing Conditions

H 33 is located west of East Ocean Air Drive near the intersection of Vereda Mar del Sol in Torrey Hills. The 40-acre parcel is owned by San Diego Gas and Electric and is the site of an SDGE power station. Adjacent uses include open space, transportation and residential development. The site is zoned Communications and Utilities, and is outside the MHPA.

Seven natural vernal pools (496 m² [5338.911 ft²]) occur at H 33. The vernal pool basins are underlain by Redding gravelly loam, and occur within non-native grassland uplands. *E. aristulatum* was observed.

Threats

Development

Given the location of the vernal pools adjacent to the SDGE substation, it is unlikely that the site will be developed. However, the site has not been formally conserved.

Invasive Species

The site is characterized by non-native grasses and may be a major factor in the lack of sensitive vernal pool plant species.

Trespass/Litter

The vernal pools are difficult to access and are isolated from public view; therefore impacts from trespass and litter are minimal.

Fire/Fire Suppression

There is a relatively low threat of impacts from fire and/or fire suppression due to the localized elevation difference and the location of nearby defensible structures.

Current Management Activities

No management actions are currently required for this site.

Management Recommendations

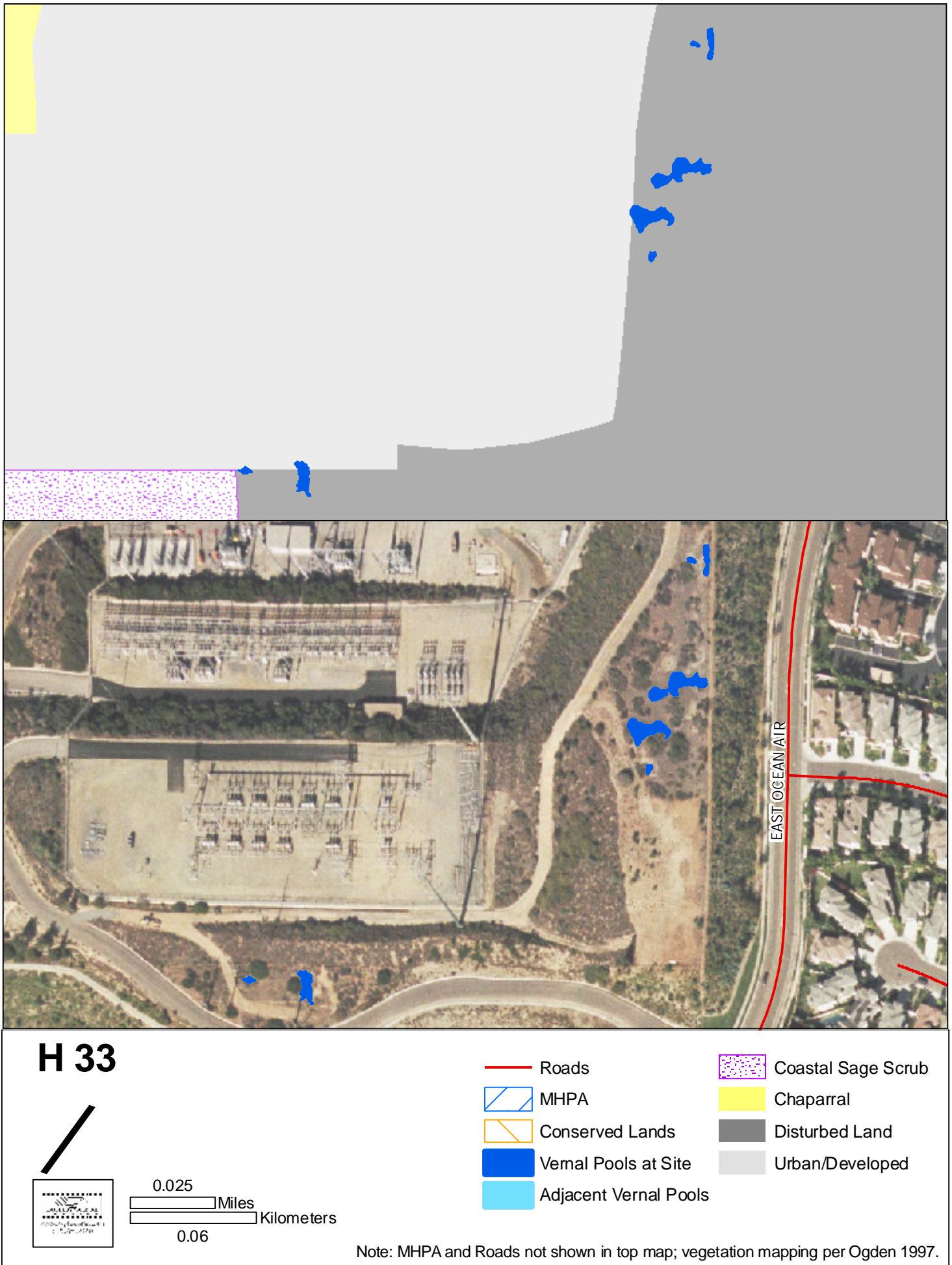
An open space easement should be placed over the area containing vernal pool habitat to ensure conservation in perpetuity.

If impacts to vernal pools are approved, any on-site mitigation options shall include vernal pool restoration/enhancement. To ensure long-term success, the mitigation shall include invasive species removal, fencing and signage, litter removal, monitoring and a fire management plan. All restoration plans shall identify the responsible party and funding source for long-term maintenance and management; endowments are the preferable funding method for management in perpetuity.

This site was identified as necessary to stabilize the populations of *E. aristulatum*, *P. abramsii*, and *B. sandiegonensis*, by the adopted *Recovery Plan for Vernal Pools of Southern California* (USFWS, 1998). All future management activities should promote the recovery and success of these species.

The vegetation is primarily non-native; therefore, a removal program for non-native invasive species and an associated upland restoration plan is recommended. The area containing vernal pools should be rezoned to Open Space.

Figure 6



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8.1.1.e *Shaw Texas (H 17)*

Site Description and Existing Conditions

The Shaw Texas (H 17) site is located west of the Del Mar Mesa open space area and adjacent to the Del Mar National Golf Course. This privately-owned site covers approximately 278 acres of historic agricultural land. It is partially within the MHPA and is being developed into residential units as the Shaw Lorenz project (PTS 2873); the U.S. Fish and Wildlife Service has prepared Biological Opinion 1-6-06-F-4005.4 in regards to this project. The watersheds and basins of the vernal pools at this site were preserved through the permitting process (see “Development” below for additional information). Shaw Texas is zoned Residential and Open Space; adjacent land uses include MHPA/open space, residential development and golf courses.

A total of 34 water-holding depressions (934.84 m² [1, 0062.5 ft²] area) were mapped by Glenn Lukos Associates (2001) and the City of San Diego (2004), including both vernal pools and road ruts. The vernal pools were historically of natural origin but were impacted by intensive agriculture prior to 1995 and today, in many cases, the basins are of anthropogenic origin. The site is within the Redding gravelly loam soil series. Upland vegetation communities include native grassland; coastal sage scrub; scrub oak, chamise and southern mixed chaparral; eucalyptus woodlands and ruderal. Sensitive vernal pool plant species were not observed during either the 2001 or 2003 surveys; *Branchinecta* spp. were observed during both surveys.

Prior to the current construction, the site was utilized for agriculture. It has been used for passive recreation and minimal off-road vehicle use in the interval between agricultural and residential development. The vernal pools and their watersheds have been conserved by a conservation easement as part of the Shaw Lorenz project ((PTS 2873) and USFWS BO 1-6-06-F-4005.4, and will be managed according to the *Vernal Pool Management Plan Shaw-Lorenz Project* (Natural Resource Consultants, 2004).

Threats

Development

The Shaw Lorenz development project has been approved for construction (PTS 2873). The vernal pool area and the associated watershed(s) were conserved via a conservation easement as a condition of the project (see PTS 60634 for conservation easement review).

Invasive Species

Non-native species occur in the disturbed and ruderal portions of the Shaw Texas site.

Edge Effects

The Shaw Texas vernal pools are bounded on all sides by development. Edge effects will be minimized by management in perpetuity.

Fire and Fire Suppression

The site may serve as a staging area in the event of a fire following the construction of defensible structures.

8.1.1.g *Salk Institute (NN 1)*

Site Description and Existing Conditions

The Salk Institute (NN 1) vernal pool area is within the proposed 1.3-acre Salk Institute North Preserve Area. It is located on private property west of North Torrey Pines Road and south of Torrey Pines Scenic Drive near the San Diego Gliderport. The vernal pools, their watershed, and adjacent upland areas are being preserved through the proposed Salk Institute Master Plan project (PTS 44675). The vernal pools are on land zoned for Industrial Parks and are proposed for adjustment into the MHPA; adjacent land uses include MHPA and open space.

Fifteen unnatural vernal pool basins (362.84 m² [.089 acres]) were mapped by Helix in 2004. No sensitive species were observed, and the underlying sandy loam soils are not associated with vernal pools at other locations within San Diego. The basins occur within a matrix of disturbed Diegan coastal sage scrub.

Based on historic aerial photographs, the pools appear to have originated from soil dumping following construction activities in the 1970s. However, the vernal pools are proposed for conservation through a covenant of easement, and will be managed in perpetuity according to directives of the Salk Institute Master Plan Habitat Management Plan (Helix 2006).

Threats

Development

The Salk Institute Master Plan project is under review by the regulatory agencies (PTS 44675). The vernal pool area and associated watersheds will be conserved via covenant of easement and managed in perpetuity as a condition of the project.

Invasive Species

Non-native species occur in the disturbed and ruderal portions of the Salk Institute site.

Edge Effects

The proposed development will increase the distance between the vernal pools and development, and will also minimize unnatural run-off through the construction of a grass-lined swale. Edge effects will be minimized through preserve design, proximity to open space, and management in perpetuity.

Fire and Fire Suppression

The conserved areas may be impacted if used as staging area during a fire suppression event.

Required Management Activities

The management activities discussed in this section are project conditions proposed for the Salk Institute Master Plan (PTS 44675). Specific details are available in the Salk Institute Master Plan Habitat Management Plan (Helix 2006). The costs associated with these required management activities, including a one-time endowment of \$42,500 to fund long-term management needs, are the responsibility of the project applicant.

A baseline inventory will be conducted within one year of issuance of the grading permit.

Vernal pool monitoring will be conducted twice a year during the rainy season to evaluate habitat and assess site condition. Control of invasive plant and animal species will occur twice a year and as necessary, respectively. Trash and debris will be removed from the site at two-month intervals.

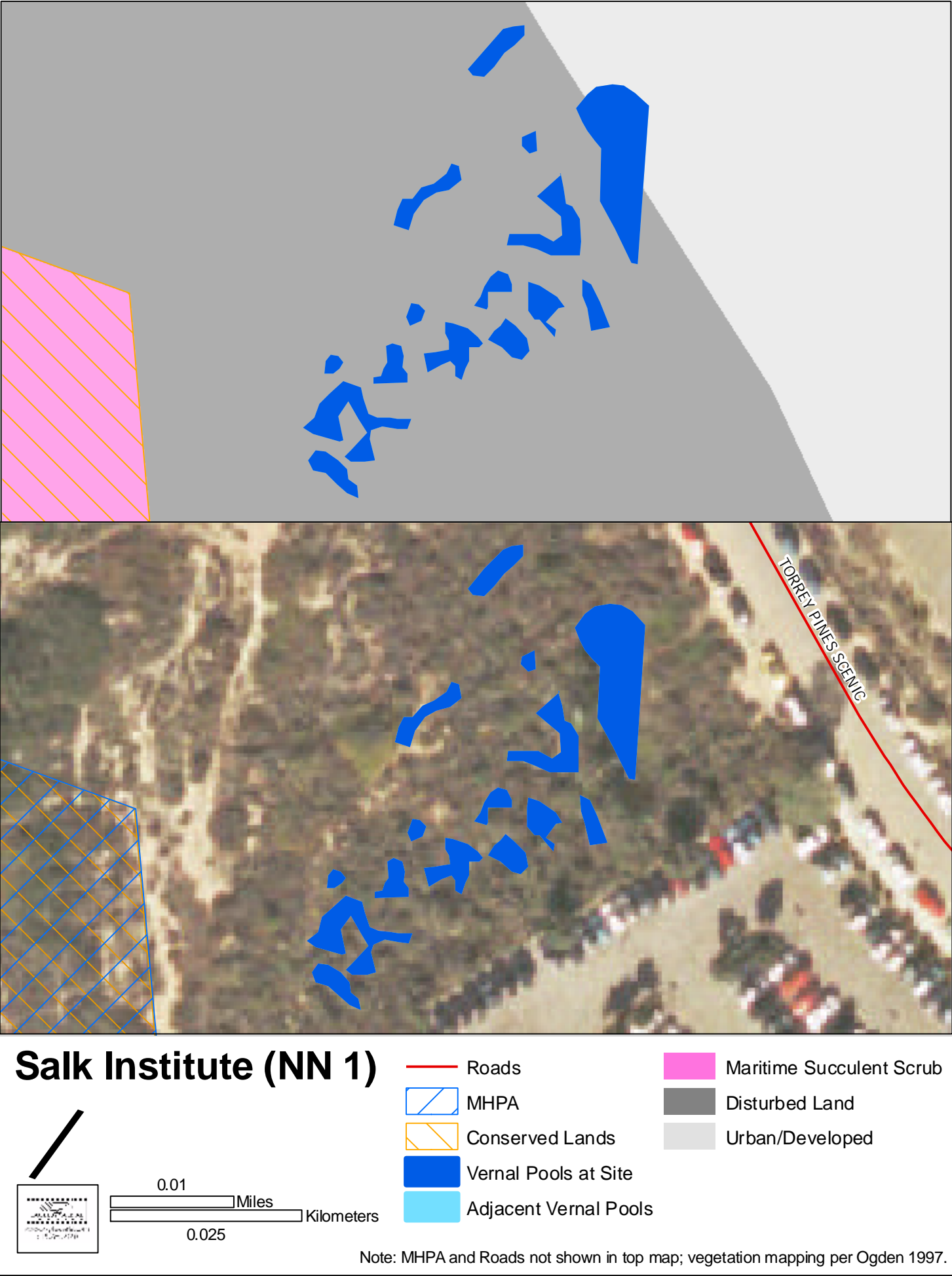
Biannual letter reports, including monitoring results and documentation of management activities, will be submitted to the Salk Institute, City of San Diego, CDFG and USFWS.

Trails will not be allowed within the preserve. Permanent fencing and signage will be installed along potential access routes, and will be maintained as necessary. Additional barriers will also be installed if unauthorized access becomes a problem in the future. Lighting will not be installed within conserved areas and, in adjacent lots, will be shielded to direct spillage away from vernal pool areas.

Management Recommendations

Due to the location adjacent to the Salk Institute, this site may be appropriate for educational purposes.

Figure 7



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